

PRODUCT INFORMATION



SC-57461A

Item No. 10108

CAS Registry No.: 423169-68-0

Formal Name: N-methyl-N-[3-[4-(phenylmethyl)phenoxy]propyl]-β-alanine, monohydrochloride

MF: C₂₀H₂₅NO₃ • HCl

FW: 363.9

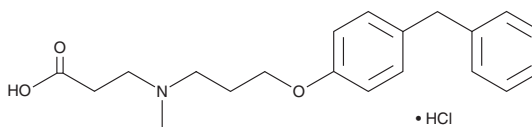
Purity: ≥98%

UV/Vis.: λ_{max}: 266, 277 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

SC-57461A is supplied as a crystalline solid. A stock solution may be made by dissolving the SC-57461A in the solvent of choice. SC-57461A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of SC-57461A in ethanol is approximately 0.25 mg/ml and approximately 3 mg/ml in DMSO and DMF.

SC-57461A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SC-57461A should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SC-57461A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Leukotriene A₄ (LTA₄) hydrolase/aminopeptidase is a bifunctional zinc metalloenzyme that both catalyzes the synthesis of LTB₄ (Item No. 20110) from LTA₄ and cleaves the chemotactic peptide Pro-Gly-Pro.^{1,2} SC-57461A is a potent, orally active inhibitor of LTA₄ hydrolase that blocks ionophore-stimulated LTB₄ synthesis in whole blood (IC₅₀ = 49 nM).^{3,4} It blocks both the hydrolase and aminopeptidase activity *in vitro*.⁴ SC-57461A is without effect against other enzymes of the arachidonic acid cascade, including 5-lipoxygenase, LTC₄ synthase, COX-1, and COX-2. In a rat model of ionophore-induced peritoneal eicosanoid production, SC-57461A inhibits LTB₄ biosynthesis without affecting LTC₄ (Item No. 20210) or 6-keto prostaglandin F_{1α} (Item No. 15210) production.⁵ Oral or topical pretreatment with SC-57461A before challenge with arachidonic acid blocks ear edema in mice.⁵

References

1. Haeggström, J.Z. *J. Biol. Chem.* **279**(49), 50639-50642 (2004).
2. Snelgrove, R.J., Jackson, P.L., Hardison, M.T., *et al. Science* **330**, 90-94 (2010).
3. Penning, T.D., Russel, M.A., Chen, B.B., *et al. J. Med. Chem.* **45**(16), 3482-3490 (2016).
4. Askonas, L.J., Kachur, J.F., Villani-Price, D., *et al. J. Pharmacol. Exp. Ther.* **300**(2), 577-582 (2002).
5. Kachur, J.F., Askonas, L.J., Villani-Price, D., *et al. J. Pharmacol. Exp. Ther.* **300**(2), 583-587 (2002).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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